

explain the condition, until after examining the scape, which I found to be leafy, especially at the top, and the upper leaves took on the shape and color of sepals and petals. I can not believe that this was a deformity, the result of an injury, as there were several plants in the same bed in the same condition. I would like to ask, is the conversion of leaves into petal-like organs a common method by which flowers are doubled?—J. SCHNECK, *Mt. Carmel, Ill.*

### GENERAL NOTES.

**Hibiscus Moscheutos and H. roseus.**—Dr. J. Guillaud, of Bordeaux, sends a pamphlet containing his investigations resulting in the identification of *Hibiscus roseus* of Thore,—a species supposed to be indigenous to the southeastern coast of France, also found in Italy,—with our marsh Hibiscus. He is not aware that the same identification has been made by Mr. Daydon Jackson, and published a year or two ago in the 19th volume of the *Journal of the Linnæan Society*, London. Dr. Guillaud has had the advantage of seeing the two plants growing spontaneously, ours in the neighborhood of New York, the other in the marshes of the Landes. *H. roseus* has also been found in Northern Italy, in the marshes of the Po and lagunes of the Adriatic; and, according to Dr. Guillaud, specimens have been received from Asia Minor, but no mention is made of it in Boissier's *Flora Orientalis*. Is this species indigenous to Europe as well as to the Atlantic coast of North America? Is it a survival from the time when the floras of Europe and of Eastern America had more common elements than they now have? Or has it somehow been conveyed across the Atlantic; and if so, whether at some early period or within historic times? Questions not easily answered. If the first, then this plant, like a few others that might be named, is in Europe what *Convallaria majalis*, *Littorella lacustris*, *Marsilea quadrifolia*, *Scotopendrium*, and perhaps *Calluna*, are in North America. In favor of the second view, and even of a late and casual introduction, it is to be said (as Dr. Guillaud notes) that Thore found the plant on the coast of France only at the beginning of this century; that it was unknown to Tournefort, who botanized around Bayonne in the autumn of 1688; that the plant has disappeared from the particular station where Thore found it and where it was said to abound; and that it is now more rare than formerly. Its spread from the Atlantic coast to that of the Adriatic, may be owing to the carriage of seeds by marsh-birds. Indeed, Dr. Guillaud thinks it may have been brought to Europe by sea-birds. On the other hand, since it is now found in the district near Mantua, he quotes the lines in Virgil's *Eclogues* in which the stems of *Hibiscus* are twice mentioned, in a way by no means *mal à propos*; but he thinks they might as well apply to Marsh-mallow.

It appears that the specific name *Moscheutos* came to Linnæus through Cornuti from a "Rosa Moscheutos" of Pliny, some kind of Rose-mallow, we may suppose. Since the two Linnæan species are clearly one, it is a pity that the

name *H. palustris* was not chosen. Torrey and Gray are responsible for that. The reason of the choice was, that *H. Moscheutos* stands first in the book, and *H. palustris* is merely differentiated from that; reasons which need not have prevailed.

A. GRAY.

**Stipules in Saxifragaceæ** are of small account, as Prof. Coulter's pupils show, by sending *Mitella diphylla* with good stipules between the cauline leaves. It seems to be regularly so.—A. GRAY.

**Notes on *Æsculus glabra*.**—One of my botany class, Mr. J. W. Milligan, has been making some observations upon the flowers of this Buckeye which seem worth recording. It is well known that the flowers tend to be polygamous, not so much from the suppression of stamens or pistils, as that they fail to develop; at least this is the way the tendency manifests itself with us. All the perfect flowers furnish good examples of protogyny, while others at first sight seem protandrous, but this latter is seen to result from a failure of the pistil to develop. In fact the forms seem so various that one is at first at considerable loss how to "place" them. The flowers are apparently in a transition state and on the way to becoming monœcious. Mr. Milligan observed that the clusters were visited by numerous bees, principally the honey bee, but that they avoided the opened flowers, and only sought the well advanced buds. The petals so poorly protect the nectar that it is easily obtained by thrusting the proboscis between them. The question was at once suggested whether this could in some measure account for the numerous sterile pistils, which far outnumber the fertile ones. The open flowers were avoided and could only have been fertilized by the chance of being near the buds, for the bees had evidently learned that the latter contained the nectar. This would necessarily result in some sterile pistils, which might lead to polygamy in effect, if not in fact. But what would lead to a suppression of stamens and so make polygamy end in monœcism would be hard to say. At any rate, it is a case of an insect attracted by a flower which it does not visit but may accidentally fertilize, and obtaining nectar from a flower which it can neither fertilize nor obtain pollen from.—J. M. C.

**La r Toxicodendron.**—I have found at Dayton a specimen of *Rhus Toxicodendron* measuring, some distance above the base, 17 inches in circumference or about  $5\frac{1}{2}$  inches in diameter. Its first branch was  $14\frac{1}{2}$  inches in circumference. Another branch was 4 inches in diameter. The specimen is remarkable for its strong and vigorous growth, and twines upon an almost dead locust tree, clothing it with the foliage of the Poison Ivy. It is close to the city and is destined to become quite an attraction to our amateur botanists.—AUG. F. FOERSTE, Dayton, O.

**Vincetoxicum.**—Following some authority, which it is now not worth while to look up, it appears that in the Synoptical Flora of N. America, I had derived this name from "*vincens*, that serves for binding," and *toxicum*. Dr. Hance, in *Britten's Journal of Botany* for May, 1883, notes, 1, that the only authority for this adjective is a line of Plautus in which *vincea* is now known to have been a mistake of some copyist for *juncea*. And, 2, that the old herbalists, Fuchs and Matthioli, clearly indicate that the Latin part of this hybrid name is from *vincere*, to conquer.—A. GRAY.

**Notes on Fresh Water Alga.**—To my note under this heading in the last GAZETTE I wish to add that it may be a question whether *Rivularia glutans* should not be referred to *Echinella articulata*, Ag. That species is known to me only through the figure in English botany and the figure given by Phillips in *Grevillea*, Vol. IX., pl. 144, a-d. From the figure in Eng. Bot. not much information can be derived, but from that in *Grevillea*, which appears to be referred without hesitation to *Echinella articulata*, Ag., one can not fail to see a close resemblance to the alga collected by Prof. Arthur, with which it also agrees in its peculiar habitat.—W. G. FARLOW.

**Chloranthy of Ranunculus Californicus.**—Green Buttercups are unusually common about San Francisco Bay this season. The persistent floral organs (excepting the almost normal yellowish stamens) are as green as the ordinary foliage. The spoon-shaped sepals are not reflexed; the hairy petals have ovate blades only two lines long, borne on slender petioles three to six lines in length. The nectariferous scales are plainly seen at the bases of the blades. Most of the capillary leaves become stipitate empty akenes, but some are open on the inner side, and a few become oblanceolate leaves two or three lines in length.—VOLNEY RATTAN, *San Francisco, Cal.*

**Discharging Ascospores.**—In the January No. of the GAZETTE appeared an interesting account of the sound of discharging ascospores observed by Mr. E. W. Holway, Decorah, Iowa. I have this spring heard the same hissing sound on opening a box in which a number of *Peziza coccinea*, Jacq., had been inclosed for two hours.

I transcribe an extract from a letter written by the distinguished botanist Haller, Gottingen, Sept. 19, 1740, to the father of botany, Linnaeus, Upsal, Sweden: "The place where I am is but a barren field for botany excepting fungi, which are plentiful. I have detected a very curious elastic motion in the common sessile *Peziza*, of a dirty white hue. The whole plant contracts spontaneously and discharges a powder upwards with a sort of hissing sound. This doubtless is the seed." He furthermore says that "fungi are a mutable and treacherous tribe;" a fact just as apparent to-day as it was 143 years ago.—L. V. MORGAN, *Cincinnati, O.*

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## EDITORIAL NOTES.

SINCE THE NOTICE in the GAZETTE of the appearance of a supplement to Chapman's Flora, many inquiries have been made regarding it. A note from Dr. Chapman conveys the information that the new edition is now on sale with Ivison, Blakeman, Taylor & Co., N. Y., and Ashmead Bros., Jacksonville, Fla. The supplement is not sold separately, but is bound with the new edition.

MR. W. B. HEMSLEY, of the Kew Gardens, is preparing a work which will be practically a flora of the remote islets of the Atlantic and Southern Oceans. With regard to the Bermudas it may be that some of the readers of the GAZETTE may be able to give some help. The composition of the flora of the Bermudas